#6

A STATUS REPORT

OF

HAWAIIAN HAWK NESTING ACTIVITIES

AT THE

PROPOSED WELL SITE #2

DLNR DESIGNATED GEOTHERMAL RESOURCE SUBZONE
KILAUEA MIDDLE EAST RIFT ZONE
PUNA DISTRICT
ISLAND OF HAWAII

May 10, 1991

BY

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PREPARED FOR:

TRUE/MID PACIFIC GEOTHERMAL VENTURE

DISCLAIMER

INTRODUCTION

On August 11, 1990 during an ornithological survey at the True/Mid Pacific Geothermal Venture proposed well site #2, a Hawaiian hawk (Buteo solitarius) nest with a nestling was found approximately 430 feet from the proposed well pad clearing. The U.S. Fish and Wildlife Service and the State of Hawaii have listed the Hawaiian hawk as an endangered species. Future development in this area could be impacted by the presence of this endangered avian species and its nest in such close proximity to the proposed well site. This report summarizes the results of observations at the nest on May 3, 1991.

BACKGROUND

The nest was found on August 11, 1990 during an initial avian survey of the proposed well site area. At that time a nestling was first heard, then seen calling from a perch approximately 50 feet from the nest. During subsequent visits to the site, the nestling was seen at the nest once and during later visits was seen in the nest vicinity.

On September 2, 1990 no hawks were seen or heard in the nest area during three hours of observation. The fledgling had most likely left the nest area prior to this date.

METHODS

A one hour observation was made using 8 x 30 Zeiss binoculars from a natural blind approximately 90 feet from the active Hawaiian hawk's nest. Thick staghorn fern and other vegetation kept the observer hidden from view of the nest. Presence or absence of the nestlings and or adults at the nest or in the area were noted.

FINDINGS

No hawks were seen at the nest or in the nest vicinity. It did appear that new nesting material had been added to the nest but this could not be confirmed. A nearby tree was climbed to obtain a better vantage point for looking into the

nest but even here the visibility into the nest was poor. Approximately two hours were spent in the area with no hawks being seen or heard during that time.

DISCUSSION

Although no Hawaiian hawks nests have been previously found in the middle east rift zone, the presence of this nest found in 1990 is not unique. Other Hawaiian hawk nests have been found nearby in other parts of the Puna District (Griffin 1985, Jeffrey 1986, Scott et al 1986).

Hawaiian Hawks will nest in a variety of habitats although habitat preferences have not been substantiated. Griffin (1985) noted Hawaiian hawks nesting in marginal forests in or near agricultural areas, in exotic forests as well as in native forests. A preference for large trees to support their relatively large nests was also noted. Numerous large ohia trees for use as possible nest sites plus high density of prey species (small birds) make many of the Puna native forest areas very suitable Hawaiian hawk habitat.

In some instances Hawaiian hawks have been known to build and maintain more than one nest. Although new nesting material may be added to a more than one nest, only one nest is active at any one time. (Jeffrey 1986). No secondary nests have been noted in the general construction zone although very little of the area has been actively searched.

Workers at the drill rig at well site #1 report having seen hawks on many occasions perched in trees at the edge of the well site clearing as well as flying near the rigs during day time drilling operations.

COMMENTS AND RECOMMENDATIONS

Some data indicate that Hawaiian hawks subjected to intermittent low levels of noise and minor disturbances may become sufficiently habituated to these disturbances to be able to produce a successful nest (pers. obs.) Although the effect of long-term high levels of noise and disturbance are not well known, they are suspected of having detrimental impact (i.e. through egg or nestling abandonment.) Griffin 1985 and The Hawaiian Hawk Recovery Plan 1984.)

Hawaiian hawks are known to re-use nests during subsequent nestings but may not nest every year due to the

prolonged post-fledgling period (Griffin 1985).

It is recommended that the nest at the proposed well site #2 be monitored intermittently during the 1991 breeding period to determine if renesting is occurring. If the nest is reactivated, then noise levels and disturbance should be kept to a minimum at the well site adjacent to the nest until the nestling(s) have fledged. Observations during this period should be made intermittently to determine the nest/nestling status.

Although successful nests have been found in small forested kipukas in agriculturally cleared areas, clearing around active nests is known to cause abandonment (Griffin 1985). It is recommended that a non-cleared forest buffer of at least 400 feet, and more if possible, be maintained around any Hawaiian hawk nests found. This distance should not be construed as an optimal buffer zone. Data are limited and more information is needed before the optimal buffer zone distance can be determined. If the nest is active, clearing or disturbance within 1000 feet should be curtailed or minimized until the nestlings have fledged.

All subsequent proposed well sites should be checked thoroughly for Hawaiian hawk nests. Due to terrain and thick vegetation of the area, it may be close to impossible to find all nests. Surveys made during late July through early August will increase the chances of finding active nests because of the intermittent loud calling of the nestling, keying the observer to the nest position.

Careful planning and cooperation between developers and biologists and appropriate detailed monitoring within the development area will generate data useful for future planning.

LITERATURE

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